

Kenai Peninsula Borough School District

Replacement & Improvement Standards

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Replacement and Improvement Standards

Guiding Principles:

- *Older buildings are architectural examples of their time and need not be remodeled to look like modern school facilities. When properly maintained, the majority of older facilities continue to be attractive and comfortable and portray the desired image of dignity and stability without extensive remodeling.*
- *Standards communicate the desired appearance of facilities as established by the KPBSD and ensure consistency throughout the borough. When properly used, standards empower administrators to make more decisions at the local level.*
- *The "life cycle" of a component is sometimes used as the reason for replacement. This is inaccurate and wasteful. The only criteria used for replacing a component should be when it meets the written standards for replacement and is validated by onsite inspection. The life cycle of a component is used to anticipate future funding needs and to bring attention to the component for evaluation purposes only.*

Replacement Standards Guidelines

The purpose of the *Replacement and Improvement Standards* is to ensure that the desired level of quality approved by KPBSD is achieved but not exceeded in our facilities. When items are replaced before they meet the replacement criteria, costs increase and the replacement is no longer defensible. For this reason, administrators are not authorized to replace items that do not meet the replacement criteria.

A certain amount of wear and tear is to be expected in our facilities and is acceptable. When this amount becomes excessive and generally distracting, the item should be considered for replacement. Replacement standards have been created for components which are more costly to replace. If a replacement standard does not exist for an item, the administrator should determine whether another replacement standard could be applied. For example, a replacement standard does not exist for kitchen cabinetry. However, the replacement standard for Millwork could be used to evaluate whether to replace kitchen cabinetry. As administrators apply the *Replacement and Improvement Standards*, they should use good judgment and common sense to ensure work is needed.

As administrators apply the *Replacement and Improvement Standards* to determine whether to replace an item, the following guidelines should be considered.

Evaluating the Condition of an Item:

1. Consider the following questions to assess the reliability of an item:
 - How well does the item serve its originally designed purpose?
 - How often does the item require repairs?
 - How often is this item in use?
 2. Consider the following questions to assess the appearance, noise level, or comfort level of an item:
 - Has the noise or comfort level of the item become a distraction?
 - If the style or color of the item is outdated, does the item meet the standard for replacement?
- If not, it should not be replaced.

Determining What Action to Take:

1. Consider a repair in the following situation:
 - If individual components of a system are failing but can be repaired. However, if major repairs persist, do a cost breakdown analysis in order to compare repair costs with replacement costs. In some cases, parts may be obsolete and replacement will be necessary.
2. Consider a partial replacement in the following situations:
 - If sections of the inventory item can be replaced with a similar color, pattern or texture, this type of replacement is justified if the item meets the standard for replacement.
3. Consider a full replacement in the following situations:
 - If individual components of a system cannot be replaced due to obsolescence.
 - If after conducting a cost breakdown analysis, it is found that the inventory item is no longer cost effective to continually repair.

Improvement Standards Guidelines

Definition:

Improvements are defined as work that:

- Extends the life of components or systems
- Increases functionality of the facility, system, or component
- Increases the quantity of an inventoried component

Application:

When determining whether to make an improvement, administrators should apply the *Replacement and Improvement Standards*. Some standards may not apply or descriptions may need to be adapted for the location. As administrators apply the *Replacement and Improvement Standards*, they should use good judgment and common sense to ensure work is needed. If additional quantity is being added or new space is being reconfigured, the administrator should verify that work complies with the boundaries and guidelines of DEED.

The following guiding principles and improvement guidelines should be reviewed before identifying, verifying, and performing improvement work.

Guiding Principles:

1. Older facilities are architectural examples of their time and need not be remodeled to look like modern schools. When properly maintained, the majority of older facilities continue to be attractive and comfortable and portray the desired image of dignity and stability without extensive remodeling.
2. If exceptional circumstances dictate modification, the results should be in harmony with the character of the original building.
3. Reasonable wear is acceptable when buildings show evidence of appropriate maintenance, cleanliness and care.

Improvement Guidelines:

1. Consultants:

Consultants may be used to assist the KPBSD in developing project scope, cycle time, and estimated costs. Once the scope has been approved, consultants should use DEED approved specifications and adhere to the Kenai Peninsula Borough Design Standards in all design work. Consultants should also be familiar with the *Replacement and Improvement Standards* and apply them in their work.

2. Additions:

Additions and reconfiguration of existing space may be made when an existing facility no longer provides for the functional needs of the school. This is determined by applying the formulas supplied by DEED.

When there is a defensible need to add new space to an existing building, additions should be designed in consultation following the Kenai Peninsula Borough Design Standards. The long term cost implications should be reviewed when considering an addition.

Additions and other improvements should be consistent with the existing architecture of the building. Existing finishes, fixtures, and components should not be replaced to match the addition unless they meet the established criteria for replacement in the *Replacement and Improvement Standards*.

3. Interior Finishes:

Existing interior finishes such as face brick or painted concrete block walls should not be upgraded with plaster, or covered with painted gypsum board or wall covering.

4. Seismic:

Seismic upgrades should only be performed when required by code and other R&I work creates an opportunity to optimize economic timing and to minimize the impact on occupants.

5. Site Work:

Retaining walls, benches, decorative planters and landscape islands in parking areas should not be added unless required by local code. For most sites, future expansion areas should be left undeveloped with no unnecessary grading or landscape improvements.

6. Landscaping:

Before replacing or upgrading landscaping, the following *Replacement and Improvement Standards* should be reviewed and applied

- General Site: Trees Replacement Standard
- General Site: Shrubs and Groundcovers Replacement Standard
- General Site: Lawns Replacement Standard

7. Parking Lighting:

Parking lighting should illuminate stalls as needed for safety and to meet local jurisdiction requirements. Do not provide accent, ornamental, seasonal, or other special lighting and related exterior power outlets on existing buildings.

8. Fencing:

If fencing is required, chain link fencing should be installed. Other fence types are permitted only when required by local jurisdictions.

Complete replacement of lay-in ceiling systems is seldom required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life nearly indefinitely. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good Tile is beginning to show defects – Grid system has no damaged components and no corrosion	Slight discoloration may be present in aging tile or around return air ducts. Spot cleaning and minor repairs to prevent sagging and remove marks have been made to maintain the condition of the tile. 75% to 95% of the system is still in excellent condition.	Do not consider replacement under these conditions.
2. Satisfactory Tile is showing defects, but is still functioning as intended. Grid system has minor damage and some discoloration.	The tile is showing slight yellowing or discoloration. Regular spot cleaning or painting has kept the tile appearance reasonable. Repairs and replacements have been made to correct sagging, fading, dented, chipped and broken tiles. 75% to 95% of the system is still in very good condition.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor Tile is showing considerable cracks, marks and defects. Grid showing significant damage and corrosion.	More than 70% of the area covered is showing discoloration, sagging, cracks and marks. Cleaning and other restoration processes are having minimal effect on the tile or grid. Repairs are needed often to correct sagging, cracking, and denting. Less than 75% of the system is in good condition.	Replace the lay- in tile and grid system.

Replacement Directives:

1. It may be necessary to replace an area, subject to considerable vandalism, with a product that is more resistant.
2. When replacing small areas, match existing pattern. When replacing entire rooms, refer to the Kenai Peninsula Borough Design Guidelines for pattern direction.
3. Ensure that an asbestos survey and report is on file for facilities built prior to 1988. Follow asbestos abatement and management practices required by code when replacing the ceiling system.

Complete replacement of acoustic tile is seldom required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration. Acoustic tile may be replaced in homogeneous wear zones, identified as:

1. Entries and hallways
2. Classrooms and offices
3. Commons

Condition	Definition	Action
1. Very Good Tile is beginning to show defects	Slight discoloration may be present in aging tile or around return air ducts. Spot cleaning and minor repairs to prevent sagging and remove marks have been made to maintain the condition of the tile. 75% to 95% of the tile is still in excellent condition.	Do not consider replacement under these conditions.
2. Satisfactory Tile is showing defects, but is still functioning as intended	The tile is showing slight yellowing and discoloration. Regular spot cleaning or painting has kept the tile appearance reasonable. Repairs and replacements have been made to correct sagging, fading, dented, chipped and broken tiles. 75% to 95% of the tile is still in very good condition.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor Tile is showing considerable cracks, marks and defects	More than 70% of the area covered is showing discoloration, sagging, cracks and marks. Cleaning and other restoration processes are having minimal effect on the tile. Repairs are needed often to correct sagging, cracking, and denting. Less than 75% of the tile is in good condition.	Replace the tile.

Replacement Directives:

1. It may be necessary to replace an area, subject to considerable vandalism, with a product that is more resistant.
2. The addition of new space does not necessarily justify the replacement of ceiling tile in existing space.
3. When replacing small areas, match existing pattern. When replacing entire rooms, refer to the Kenai Peninsula Borough Design Guidelines for pattern direction.

This standard is used to evaluate and describe item being considered.

Condition	Definition	Action
1. Very Good The system functions at the original design levels	Occupants can hear clearly. There is no distracting noise. The system is reliable. Necessary balancing and other adjustments keep the system functioning at design levels.	Do not consider replacement under these conditions.
2. Satisfactory The system continues to function with intermittent component repairs, replacements, and minor system improvements	Occupants can hear clearly. There is no distracting noise that cannot be corrected. Some components have failed and have been replaced. Other components are approaching the end of their useful lives.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor The overall sound system is subject to constant breakdowns and delivers inadequate sound quality.	Occupants are distracted by the failures of the sound system and noise. The components are old and undependable. The technology is out of date. Repair costs have become intolerable.	Replace the sound system.

Replacement Directives:

1. Qualified consultants, drawings, specifications and details should be used when replacing sound system parts and components.
2. Existing sound system components such as speakers, speaker cans, speaker cable, microphones, etc. that are in good condition should be maintained wherever possible.
3. Ensure that an asbestos survey and report is on file for facilities built prior to 1988. Follow asbestos abatement and management practices required by code when replacing the sound system.

Complete replacement of a countertop is seldom required. This does not take vandalism into consideration. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years.

Condition	Definition	Action
1. Very Good The countertop is beginning to show wear. Regular cleaning keeps the countertop in good condition.	The countertop may have some scratches or small chips at this point. The surface is not seriously dented or scratched. There is no fading or discoloration present. All corners and side pieces are tight.	Do not consider replacement under these conditions.
2. Satisfactory The countertop is showing defects, but is within acceptable limits. The countertop continues to serve its purpose with regular cleaning and minor repairs.	The countertop may have some minor dents, chips and scratches. The finished surface is beginning to fade and wear. Some discoloration may be present, but the countertop is still usable. Some of the corners or side pieces may need to be re-adhered or replaced.	Replacement is not yet justified. Make necessary repairs and section replacements.
3. Poor The countertop is showing serious and extensive discoloration and defects.. It no longer serves its purpose as originally designed. Damage or decomposition to the countertop substrate exists.	The countertop has many scratches, dents and chips. The finish surface is faded and wearing thin. De-lamination is occurring and re-adherence is not viable due to the damaged substrate. Discoloration is present and side and corner pieces are loose or broken.	Replace the countertop. If only one section of the countertop is in bad shape, try and get a match in materials and replace only that one part.

Replacement Directives:

1. Use only qualified consultants, specifications and/or details when replacing a countertop
2. Wherever possible, continue to use existing sections or components that are in good condition, such as corner pieces, side pieces or entire sections of countertop. This may not be possible if a color or design match cannot be made.
3. Refer to Kenai Peninsula Borough Design Standards when replacing countertops.

Complete replacement of storefront doors is seldom if ever required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good Necessary adjustments and minor parts replacement may be necessary. Some fading of anodized aluminum is prevalent.	The system is totally reliable. Adjustments and minor parts replacement will maintain the integrity of door system. 75% or more of the anodized area, and hardware surfaces, on a particular storefront door assembly are still in excellent condition.	Do not consider replacement under these conditions.
2. Satisfactory The system continues to function with intermittent component repairs, replacements.	The door functions adequately. Some components have failed and have been replaced. Others are approaching the end of their useful lives. 75% of the anodized area, and hardware surfaces, on a particular storefront door assembly are still in very good condition.	Replacement of the entire door assembly is not yet justified. Make necessary repairs and component replacements.
3. Poor The Storefront Door no longer functions as designed and will not without major repairs.	Door sags from hinge failure. Locking system is inoperable. More than 40% of the anodized areas and weather stripping is gone. Panic hardware is inoperable and new panic hardware is incompatible with the old door.	First replace the components such as the hinge or the panic hardware. Replace the door as the last resort.

Replacement Directives:

1. Use only qualified professional glazing contractors when replacing an entire system.

Complete replacement of doors is seldom if ever required. This does not take vandalism into consideration. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years.

Condition	Definition	Action
1. Very Good Necessary adjustments and minor parts replacement may be necessary. Only minor scratches and wear on the hardware and veneer are evident. The door functions as originally installed.	The operation of the door is totally reliable. Adjustments and minor parts replacement will maintain the integrity of door. 85%-95% of the surface area of the door, door- frame and hardware are in original condition. The hardware is showing only slight wear.	Do not consider replacement under these conditions.
2. Satisfactory The door continues to function with intermittent component repairs, replacements.	The door functions adequately. Some components have failed and have been replaced, others are approaching end of their useful lives. 85%-95% of the finish of the door, door-frame and hardware are still in very good condition. The door may have a slight amount of warp.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor The door no longer functions as designed and will not without major repairs.	Door sags from hinge failure. Locking system is inoperable. More than 40% of surface finish of door and hardware is damaged. The door is warped and cannot be adjusted to latch. Panic hardware is inoperable and new panic hardware is incompatible with the old door.	First replace the components such as the hinge, the door lock. Replace the door as the last resort.

Replacement Directives:

1. Replace with equal veneer selection, stain colors and specifications as closely as possible.
2. When partial replacement occurs, maintain consistency in styles and ratings of doors and components.
3. When replacing doors in entire building or building section, replace with doors and hardware meeting current code and Kenai Peninsula Borough Design Standards.

Complete replacement of fencing is seldom required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration

Condition	Definition	Action
1. Very Good The fence is beginning to show wear. Necessary adjustments allow the fence to continue its designed purpose.	Chain link fence is straight and tight, with slight bending and / or sagging mesh. Supporting posts are straight.	Do not consider replacement under these conditions.
2. Satisfactory The fence is showing defects, but is within acceptable limits. The fence continues to function with regular maintenance and intermittent repairs.	Chain link fence could be bent in some areas due to cars, snow removal, or people (climbing on it). Sections of mesh may need to be replaced. Supporting posts are still straight.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor The fence is showing serious and extensive discoloration, rust and other defects. The fence is continually breaking or damaged. It is no longer useful and does not function as designed.	Chain link fence is no longer straight and has several areas of bent mesh. Many supporting posts are bent and several wire ties are missing. Trees and bushes may have grown into the fence, bending and distorting the mesh. Most of the fence no longer serves its original purpose.	Replace the damaged areas of the fence. Full replacement should only be considered if the cost of repairs exceeds the cost of replacement.

Replacement Directives:

1. Use only qualified contractors when replacing chain link fencing.
2. Wherever possible, use existing components that are in good condition, such as supporting posts.
3. Use Kenai Peninsula Borough Design Directives when replacing fencing for specifications and design details.

Carpet will last beyond the warranty period if installed and maintained properly. Carpet replacement may include all the carpet in a facility or the carpet may be replaced in homogeneous wear zones. Wear zones may be identified as:

1. Entries and Hallways
2. Classrooms and offices

Condition	Definition	Action
1. Very Good Carpet is beginning to show wear.	Slight matting or fading may be present in areas of heaviest traffic. Regular spotting and cleaning have maintained the carpet's attractive appearance. Small repairs may have been made to correct some snagging, or fraying. There is no visible seam separation, bubbling, backing separation, or tearing. 75% to 95% of the carpet in the area being inspected is still in excellent condition.	Do not consider replacement under these conditions.
2. Satisfactory Carpet is showing wear, but is within acceptable limits	Heaviest traffic areas are showing matting or fading. Regular spotting and cleaning have kept the carpet looking attractive. Repairs have been made to correct frizzing, fraying, seam separation, backing separation, bubbling, or tearing. 75% to 95% of the carpet is still in very good condition.	Replacement is not yet justified. Make necessary repairs or component replacements.
3. Poor Carpet is showing considerable wear.	50% or greater of the carpet is showing matting or fading. Frizzing is irreversible. Regular spotting and cleaning has little or no effect on appearance. Repairs must be made constantly to correct snagging, fraying, seam separation, bubbling, backing separation, or tearing.	Replace the carpet.

Replacement Directives:

1. Use only qualified consultants, specifications and/or details when replacing chain link fencing.
2. Wherever feasible, the use of carpet squares is recommended. New colors should be chosen to complement other existing carpet, and is not a justification to replace other carpets or furnishings
3. Inspection and application of this standard is justification for carpet replacement, not once the carpet has reached the end of its expected life.
4. Use Kenai Peninsula Borough Design Directives when replacing carpet.

Complete replacement of hardwood flooring is seldom if ever required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The flooring is beginning to show wear. Regular cleaning and preventative maintenance keep the floor in good condition.	Floor has slight scratches, but no gouges, discoloration or finish build-up. There is no chipping or peeling of the finish. Finish is slightly worn in high traffic areas only. There are no loose, broken or missing portions.	Do not consider replacement under these conditions.
2. Satisfactory The flooring is showing defects, but is within acceptable limits. It continues to function as originally designed with regular maintenance.	Floor has some scratches and/or gouges. There is discoloration and finish build-up. There may be some chipping and peeling of the finish. Finish shows some wear throughout. There are no loose, broken or missing portions.	Replacement is not yet justified. Refinish the floor and make repairs as needed.
3. Poor The flooring is showing considerable marks and defects. Floor is extensively worn. The surface no longer functions as designed and will not without major repairs.	Floor has considerable scratches gouging is present. There is discoloration and finish build-up. There is chipping and peeling of the finish. Planks have been sanded numerous times and are wearing thin. Water damage may be present, causing the planks to cup and buckle, which causes uneven sections. Separation of planks has caused many areas to squeak when stepped on.	Replace the floor.

Replacement Directives:

1. Use only qualified consultants, specifications and/or details when replacing chain link fencing.
2. Hardwood floors can be sanded numerous times before they need to be replaced.
3. Before replacing a floor, consider whether making repairs and replacing some planks can extend the life of the floor.
4. When replacing a gym floor, take off the basketball rims in order to prevent people from playing on the floor before finishing has cured.
5. Use Kenai Peninsula Borough Design Directives when replacing wood floors.

Complete replacement of tile flooring is seldom if ever required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The tile floor is beginning to show wear. Regular cleaning and preventative maintenance keep appearance clean and new.	The floor has no discoloration or worn surface. There may be slight cracks, with no chipped or broken tiles. There are no loose or missing portions. Grout is uniform in color and appearance.	Do not consider replacement under these conditions.
2. Satisfactory The tile floor is showing defects, but is within acceptable limits. The tile surface continues to serve its purpose with regular cleaning and intermittent repairs.	The floor has no discoloration or worn surface. There may be some hairline cracks or chips, but no tiles are broken. There are no loose or missing portions. Grout may show variation in color or appearance.	Replacement is not yet justified. Make necessary repairs and individual tile replacements.
3. Poor The floor tile is showing considerable wear and defects. The floor tile no longer serves its purpose. The appearance of the tile is distracting.	50% or more of the floor is discolored and a worn surface. There are cracks and/or chips present with some tiles broken. There are some loose, broken or missing portions. Grout shows obvious variation in color and appearance. Some grout is loose or missing.	Replace the floor tile. If only one section of tile has been damaged or worn due to heavy traffic, consider only replacing that tile area. This may not be possible if a tile match cannot be made.

Replacement Directives:

1. Use only qualified consultants, specifications and/or details when replacing floor tile.
2. If only one section of tile has been damaged, find matching tile and only replace the damaged section.
3. When replacing floor tile, make sure to buy extra tiles and store them for future repairs and replacements.
4. Dissatisfaction with color is not justification to replace the tile.
5. Use Kenai Peninsula Borough Design Directives when replacing floor tile.

Replacement Standards

Flooring: Tile – VAT or VCT

Complete replacement of tile flooring is seldom if ever required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

****Any work that disturbs Vinyl Asbestos Tile (VAT) or mastic containing asbestos should be undertaken only by qualified Abatement individuals.**

Condition	Definition	Action
1. Very Good The tile floor is beginning to show wear. Regular cleaning and preventative maintenance keep appearance clean and new.	The floor has no discoloration or worn surface. There may be slight cracks, with no chipped or broken tiles. There are no loose or missing portions.	Do not consider replacement under these conditions.
2. Satisfactory The tile floor is showing defects, but is within acceptable limits. The tile surface continues to serve its purpose with regular cleaning and intermittent repairs.	The floor has no discoloration or worn surface. There may be some hairline cracks or chips, but no tiles are broken. There are no loose or missing portions. Joints between tile may be open slightly.	Replacement is not yet justified. Make necessary repairs and individual tile replacements.**
3. Poor The floor tile is showing considerable wear and defects. The floor tile no longer serves its purpose. The appearance of the tile is distracting.	50% or more of the floor is discolored and a worn surface with cracks and/or chips present with some tiles broken. There are some loose, broken or missing portions. Joints between tile are wide enough for debris to be trapped.	Replace the floor tile. If only one section of tile has been damaged or worn due to heavy traffic, consider only replacing that tile area. This may not be possible if a tile match cannot be made.**

Replacement Directives:

1. Use only qualified consultants, specifications and/or details when replacing floor tile.**
2. If only one section of tile has been damaged, find matching tile and only replace the damaged section.
3. When replacing floor tile, make sure to buy extra tiles and store them for future repairs and replacements.
4. Dissatisfaction with color is not justification to replace the tile.
5. Use Kenai Peninsula Borough Design Directives when replacing floor tile. Any work that disturbs Vinyl Asbestos Tile (VAT) should be undertaken only by qualified Abatement individuals.

Replacement Standards

General Site: lawns

Complete replacement of a lawn area is seldom required when the lawn is installed in compliance with generally accepted standards.

Selective removal of lawn areas is justified if they are no longer meeting the design criteria or needs of the facility.

Replacement of lawn areas should be evaluated against the following criteria:

Condition	Definition	Action
1. Very Good The lawn area has sustained some damage, but generally is in a healthy condition.	Lawn is new and/or healthy. Poor maintenance practices, natural forces or insects/pests have damaged the lawn area.	Do not consider replacement under these conditions. Provide preventative measures of maintenance as directed by qualified groundskeepers.
2. Satisfactory The lawn area is showing improvement from previous damage sustained earlier in its life.	Growth and development of the lawn area is continuing though hindered by poor maintenance practices, poor soil conditions, natural forces or insects/pests. Most damage has been stopped or altered enough to extend its life.	Replacement is not yet justified. Perform necessary maintenance as recommended by qualified groundskeeper.
3. Poor The lawn area is showing serious or extensive wear and/or damage.	50% or more of the lawn has died. Deterioration has caused concern for safety and protection of surrounding plants, surfaces, buildings, etc.	Replace the affected areas as required through re-seeding or sod.

Replacement Directives:

1. Schedule replacement during the cool season so that there is no significant stress on the lawn during installation.
2. Use Kenai Peninsula Borough Design Directives when replacing lawns.

Replacement Standards

General Site: Shrubs & Groundcovers

Selective removal of shrubs and ground covers as they exceed full maturity is justified if they are no longer meeting the design criteria or maintenance has not kept the shrub or groundcover relevant. Consult with the qualified landscape architect to assist in this evaluation.

Condition	Definition	Action
1. Very Good The shrub or groundcover has sustained some damage, but generally is in a healthy condition.	Shrub or ground cover is new and/or healthy. Poor maintenance practices, natural forces or insects/pests may have slightly damaged the shrub or groundcover. Long-term effects are negligible.	Do not consider replacement under these conditions. Provide preventative measures of maintenance as directed by qualified groundskeepers.
2. Satisfactory The shrub or groundcover is showing some signs of deterioration but still has good form and a healthy structure.	30%-50% of the limbs have died or show considerable signs of altered growth. Extensive damage to the growth areas of the shrub or groundcover has occurred due to insects/pests infestation or other natural forces.	Replacement is not yet justified. Perform necessary maintenance as recommended by qualified landscape architect.
3. Poor The shrub or groundcover is showing serious or extensive wear and/or damage. They have poor form, are causing damage to other site elements or are a safety hazard.	50% or more of the shrub or groundcover has died. Deterioration has caused concern for safety and protection of surrounding plants, surfaces, buildings, etc. Neatness & cleanliness are significant concerns.	Replace the shrub or groundcover.

Replacement Directives:

1. Proper maintenance can extend the life of the plants. If the shrub or groundcover cannot be saved and the analysis justifies replacement, do not repair any damaged areas. Replace the plant.
2. Use Kenai Peninsula Borough Design Directives when replacing shrubs or ground cover plants.

Selective removal of trees as they reach maturity is justified if they are creating a hazard. Consult with a qualified landscape architect or certified arborist to assist in this evaluation.

Each tree should be inspected and recommendations reported by the qualified certified arborist or assigned specialist selected to oversee maintenance of the tree.

Condition	Definition	Action
1. Very Good The tree has sustained some damage, but generally is in a healthy condition.	Tree is new and/or healthy. Poor maintenance practices, natural forces or insects/pests may have slightly damaged the tree.	Do not consider replacement under these conditions. Perform preventative measures and maintenance as directed by qualified groundskeepers.
2. Satisfactory The tree is showing improvement from previous damage sustained earlier in its life but still has good form and a healthy structure.	Growth and development of the tree is continuing though hindered by poor maintenance practices, natural forces or insects/pests that affected its earlier growth. Most damage has been stopped or altered enough to extend the life of the tree.	Replacement is not yet justified. Perform necessary maintenance as recommended by qualified arborist.
3. Poor The tree is showing serious or extensive wear and/or damage. It has poor form, is causing damage to other site elements or is a safety hazard.	50%-75% of the tree has died. Deterioration and/or poor growth has caused concern for safety and protection of surrounding plants, surfaces, buildings, etc. Messiness and cleanliness are significant concerns.	Replace the tree.

Replacement Directives:

1. Determine whether continued upkeep can extend the life of the tree. If not, perform corrective maintenance to those areas that may result in a life safety situation.
2. Use qualified landscape architect following Kenai Peninsula Borough Design Directives when replacing trees.
3. “Legacy” or “Historic” trees should be evaluated under the same criteria as those listed above. If they are a serious threat to life and safety, they can be removed in a timely fashion to provide the necessary safety needed for proper management of the site.

The air cooled condensing unit should last well beyond the warranty period when it is installed in compliance with KPB specifications.

Condition	Definition	Action
1. Very Good The unit functions properly and the building zone is cooled effectively.	The condensing unit is new or operates with near new reliability.	Do not consider replacement under these conditions.
2. Satisfactory The unit functions properly most of the time.	Some components may need to be repaired or replaced. The unit is generally reliable. Annual inspections reveal potential failure of individual components.	Replacement is not yet justified. Perform necessary repairs or component replacements.
3. Poor The unit breaks down frequently during critical operating periods.	The condensing unit is unreliable. Parts and technology are obsolete.	Replace the condensing unit.

Replacement Directives:

1. Before replacing a compressor, a professional mechanical engineering consultant should inspect the refrigerant piping to determine if the refrigerant piping installation is the cause of the compressor failure. Correct or replace the refrigerant piping as necessary per the condensing unit manufacturer's recommendations before replacing a compressor or condensing unit.
2. If the warranty period has expired on units with a capacity of less than ten tons it is generally less expensive to replace the entire unit rather than just the compressor. For units with a capacity of ten tons or more it is generally less expensive to replace a compressor rather than the entire unit. However, in either case a life cycle cost analysis should be done to determine the proper solution.
3. Use Kenai Peninsula Borough Design Directives when replacing any HVAC equipment or components.

Replacement Standards

HVAC: Air Handling Units

Replacement of air handling units is seldom if ever required when it is installed in compliance with KPB guidelines, specifications and details and it is maintained properly.

Condition	Definition	Action
1. Very Good The blower section delivers heating and cooling air effectively to the building zone.	The air handling unit is new or operates with near new reliability.	Do not consider replacement under these conditions.
2. Satisfactory The blower section delivers heating and cooling air adequately to the building zone with regular maintenance and intermittent repair to the blower and coil sections.	Some components may need to be repaired or replaced. The unit is generally reliable. Annual inspections reveal potential failure of individual components to allow timely repair.	Replacement is not yet justified. Perform necessary repairs or component replacements.
3. Poor Components of the air handling unit have failed and parts are no longer available.	The structural frame and/or the steel sheet metal cabinet frame are failing because of corrosion or operational stress.	Replace the air handling unit.

Replacement Directives:

1. A professional mechanical engineering consultant should be used when replacing air handling units to ensure compatibility with existing equipment and ductwork and to review the complete system design.
2. Use Kenai Peninsula Borough Design Directives when replacing any HVAC equipment or components.

A hot water or steam boiler will last well beyond the warranty period when it is installed in compliance with KPB specifications and maintained according to the manufacturer's recommendations.

Condition	Definition	Action
1. Very Good Necessary adjustments keep the boiler functioning at the original design levels.	The boiler operates economically. Operating noise is not noticeable.	Do not consider replacement under these conditions.
2. Satisfactory The boiler continues to function with regular maintenance and intermittent repairs.	The boiler's efficiency may be slightly diminished, affecting the economy of operation. The boiler's structure and components are still in good and safe condition. Some boiler parts have been replaced. Other original parts may not be functioning at peak levels.	Replacement is not yet justified. Perform necessary repairs and component replacements.
3. Poor The boiler no longer functions as designed and will not without major repairs. The technology may be outdated.	Operating efficiency and effectiveness have declined. Water level and pressure cannot be maintained consistently due to leaks or poor component support. Heating tubes may have deteriorated.	Full replacement should only be considered if the cost of repairs exceeds the cost of replacement. Increased efficiency is not justification to replace boiler.

Replacement Directives:

1. A boiler will operate at optimum design levels if an effective maintenance program (water treatment, thorough cleaning, small leak repair, and scale removal) is implemented. Adjustments to boiler controls, valves, burners, and safety devices may be necessary to operate as efficiently as possible.
2. A professional mechanical engineering consultant should be used when replacing a hot water or steam boiler to ensure compatibility with existing HVAC system equipment, to review system for correct design, and review the piping distribution system to determine its useful life
3. If the heat exchanger has failed but the other components are functioning, perform a life cycle cost analysis to determine whether to replace the heat exchanger or the entire boiler.
4. Use Kenai Peninsula Borough Design Directives when replacing any HVAC equipment or components.

Condition	Definition	Action
1. Very Good The controls function properly.	The controls are new or operate with near new reliability.	Do not consider replacement under these conditions.
2. Satisfactory The controls function properly most of the time.	Some components may need to be repaired or replaced. The controls are generally reliable and the components are not obsolete.	Replacement is not yet justified. Perform necessary repairs or component replacements.
3. Poor The controls fail frequently and the warranty period has expired.	The thermostat and/or sensor do not reliably activate the heating and cooling equipment or maintain temperature settings.	Replace the thermostat and/or room sensor and other components of the system as required.

Replacement Directives:

1. A professional mechanical engineering consultant should be used when replacing control systems.
2. Earlier model thermostats will need to be replaced when they are no longer dependable.
3. The thermostat should be replaced with the most current specified thermostat model.
4. Other auxiliary temperature control components should be reviewed and replaced if they are not compatible with the replacement thermostat.
5. Use Kenai Peninsula Borough Design Directives when replacing distribution piping.

Condition	Definition	Action
1. Very Good Chilled water, hot water or steam is delivered effectively to all air coils for each building zone.	The piping and control valves do not leak. The pumps function with routine maintenance. Water treatment is current.	Do not consider replacement under these conditions.
2. Satisfactory Chilled water, hot water or steam flow to all air coils is adequate to cool/heat each building zone.	Minor leaks need repair and some parts need replacement over time. Water treatment is current.	Replacement is not yet justified. Perform necessary repairs or component replacements. Replace terminal control valves if obsolete or not functioning. Replace pump seals and gaskets if leaking.
3. Poor Chilled water, hot water or steam is delivered inadequately to air coils and the building zone is not cooled or heated adequately.	Several major leaks have occurred. Water treatment is not current. Pipe wall thickness is near failure i.e. 50% or less of the original pipe wall thickness. (measured by cutting open the pipe section at an elbow).	Full replacement should only be considered if the cost of repairs exceeds the cost of replacement. Replace piping, pumps, traps and all other piping accessories as required

Replacement Directives:

1. A professional mechanical engineering consultant should be used when replacing distribution piping.
2. Use Kenai Peninsula Borough Design Directives when replacing distribution piping.

A duct furnace should last well beyond the warranty period when it is installed in compliance with KPB specifications and maintained according to the manufacturer's recommendations.

Condition	Definition	Action
1. Very Good The furnace functions properly and the building zone is heated effectively.	The furnace is new or operates at near new reliability.	Do not consider replacement under these conditions.
2. Satisfactory The furnace functions properly most of the time.	Some minor components such as controls, wiring and gas valve may need to be repaired or replaced. The furnace is reliable provided annual inspections reveal potential failure of individual components to allow timely repair.	Replacement is not yet justified. Perform necessary repairs and component replacements.
3. Poor The furnace breaks down frequently during critical operating periods	The furnace is unreliable, parts and technology are obsolete. Measured carbon dioxide levels may indicate a potentially dangerous cracked heat exchanger.	Replace the furnace.

Replacement Directives:

- Existing duct work and other parts that are still in usable condition should be re-used whenever possible.
- A professional mechanical engineering consultant should be used when replacing a duct furnace to ensure compatibility with existing HVAC system equipment and to review system for correct design.
- Use Kenai Peninsula Borough Design Directives when replacing any HVAC equipment or components.

A forced air furnace should last well beyond the warranty period when it is installed in compliance with KPB specifications and maintained according to the manufacturer's recommendations.

Condition	Definition	Action
1. Very Good The furnace functions properly and the building zone is heated effectively.	The furnace is new or operates at near new reliability.	Do not consider replacement under these conditions.
2. Satisfactory The furnace functions properly most of the time.	Some components may need to be refurbished or replaced. The furnace is reliable provided annual inspections reveal potential failure of individual components to allow for timely repair.	Replacement is not yet justified. Perform necessary repairs and component replacements.
3. Poor The furnace breaks down frequently during critical operating periods	The furnace is unreliable, parts and technology are obsolete. Measured carbon dioxide levels may indicate a potentially dangerous cracked heat exchanger.	Replace the furnace.

Replacement Directives:

1. Existing duct work and other parts that are still in usable condition should be re-used whenever possible.
2. A professional mechanical engineering consultant should be used when replacing a duct furnace to ensure compatibility with existing HVAC system equipment and to review system for correct design.
3. If the heat exchanger has failed but the other components are functioning, perform a life cycle cost analysis to determine whether to replace the heat exchanger or the entire furnace.
4. Use Kenai Peninsula Borough Design Directives when replacing any HVAC equipment or components.

It should be possible, with proper and timely repairs and preventive maintenance, to extend the life of the lighting fixtures for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good Fixture is like new (typically less than 15 years old)	Lenses or covers have no cracks or discoloration. Operating noise is not noticeable.	Do not consider replacement.
2. Satisfactory Fixture is showing some wear or damage (typically 15-25 years old)	Cracked or discolored lenses or covers can be economically replaced. Operating noise is acceptable.	Replacement is not yet justified unless repairs approach the cost of replacing the fixture.
3. Poor Fixture is showing considerable wear or damage or is dangerous.	Repairs either cannot be made or would be more costly than replacement. Operating noise is distracting.	Replace the fixture.

Replacement Directives:

1. Recommended lighting levels should be met and maintained. Levels are documented in the Lighting Design Table in the Kenai Peninsula Borough Design Directives. A good quality lighting meter and its proper application are necessary for measuring and evaluating existing lighting levels.
2. Professional electrical engineering consultants should be utilized when replacing lighting in the chapel, cultural hall, or parking area.
3. Lighting fixture types and lamp colors should be consistent within a room or corridor.
4. Changes made solely for energy savings must meet required payback criteria.

Complete replacement of millwork is seldom if ever required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life of the millwork for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The millwork is beginning to show wear. Regular cleaning keeps the millwork in good condition.	The millwork may have some scratches or small chips. The surface is not seriously dented or scratched. There is no fading or discoloration present.	Do not consider replacement under these conditions.
2. Satisfactory The millwork is showing defects, but is within acceptable limits. The millwork continues to serve its purpose with regular cleaning and minor repairs.	The millwork may have some minor dents, chips and scratches. The finished surface is beginning to fade and wear. Some discoloration may be present, but the millwork is still usable.	Replacement is not yet justified. Make necessary repairs and component replacements. Millwork can be sanded down and re-stained if necessary.
3. Poor The millwork is showing considerable wear and defects.	50% or more of millwork has deep scratches, dents chips cracks or missing sections, and the finish surface is faded and/or discoloration is present.	Replace the damaged portions of millwork and finish to match existing. Refinish the portions of millwork not being replaced as needed.

Replacement Directives:

1. Consider rubber base when replacing wood baseboard.

Complete replacement of folding accordion doors is seldom required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good Necessary adjustments and minor parts replacement may be necessary	The system is totally reliable. Minor repairs, parts replacement and adjustments may need to be made to maintain the system.	Do not consider replacement under these conditions.
2. Satisfactory The system continues to function with intermittent component repairs, replacements.	The door functions adequately. Some components have failed and have been replaced and others are approaching the end of their useful lives.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor The overall folding partition is subject to constant breakdowns and functions inadequately.	Door does not glide properly on track. Locking system is inoperable. More than 40% of the panels are damaged. Rubber seals, top and bottom, are missing.	Make a study and life cycle cost analysis to determine whether to replace faulty components of the folding partition or replace it entirely.

Replacement Directives:

1. Use only manufacturers recommended specifications and details or Kenai Peninsula Borough recommended supplier/installer, when replacing an entire system.
2. Whenever possible, continue to use as many existing components that are in good condition, such as headers and wood trim.
3. It should be possible, with proper and timely repairs, maintenance and necessary replacements, to extend the life of the entire folding partition for many years without replacement of the entire door system.

Complete replacement of partitions is seldom required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The partition is beginning to show slight signs of wear. Necessary adjustments to the hardware help the partition serve its purpose.	The partition has no dents, rust or broken hardware. The partition walls are securely anchored to the wall(s) and floor. Some bolts or screws may be loose and there may be a few scratches on the walls.	Do not consider replacement under these conditions.
2. Satisfactory The partition is showing some wear but is within acceptable limits. The partition functions properly with regular maintenance and intermittent repairs.	Some of the hardware may need to be tightened or replaced. Rust may be present, but not enough to cause structural damage to the walls or door. Partition walls may be coming loose from floors and wall(s). There may be some dents or marks visible at this point.	Replacement is not yet justified. Make necessary repairs and component replacements
3. Poor The partition is showing a considerable amount of wear. The partition no longer functions as originally designed and will not without major repairs.	The partition hardware does not function properly and needs to be replaced. Some replacement parts are no longer available. Rust is beginning to crumble the bottom and sides of the partition walls. The walls are becoming less stable due to a rusted bottom and screws that are coming out of the wall.	Replace the Partition

Replacement Directives:

1. It may be necessary to replace an area, subject to considerable vandalism, with a product that is more resistant, such as a hard plastic.
2. Stall partition replacements should be coordinated with restroom renovations, especially when floor or wall tile is being replaced.
3. Use Kenai Peninsula Borough Design Directives when replacing toilet partitions.

Complete replacement is seldom required when paving is installed in compliance with KPB specifications which have been site adapted. A conscientious and consistent program of scheduled preventive maintenance work to each part of the pavement will maximize the useful life. This includes regular sweeping of the parking area, inspecting for damage, sealing cracks, and timely application of sealers.

Condition	Definition	Action
1. Very Good The pavement is beginning to show some wear and/or weathering.	There are a few cracks, oxidation has started (the asphalt color is changing from black to gray) but there is no raveling (loss of surface material due to weathering or traffic).	Do not consider replacement under these conditions. Perform crack sealing to prevent further damage.
2. Satisfactory The pavement shows signs of wear and/or weathering.	There are some linear cracks, some alligator cracking, no potholes, minor raveling and some oxidation.	Replacement is not yet justified. Make necessary repairs and replace small sections as needed. Seal cracks, remove and replace alligator crack areas with shallow or deep patch depending on the condition of the base and sub-base.
3. Poor The pavement shows considerable wear and/or weathering.	There are numerous linear cracks, areas of alligator cracking occupying about 50% (or more) of the pavement, some potholes, and considerable oxidation and raveling	Before replacing the entire lot, perform a life cycle cost analysis to ensure replacement is justified. If complete replacement is not justified seal cracks, remove and replace alligator crack areas with shallow or deep patch depending on the condition of the base and sub-base, fill potholes, apply asphalt emulsion sealer and re-stripe.

Recommended Action Based Upon Inspection:

It should be possible with proper and timely repairs and preventive maintenance to extend the life of the pavement in good condition for many years. Applying a sealer or slurry seal when needed will greatly extend the life of pavement. A sealer should be considered when the asphalt shows more extensive raveling due to loss of small aggregate material. Perform a life cycle cost analysis to determine the best solution.

1. When the asphalt paving is 12 to 18 months old, an emulsion sealer should be applied to the asphalt to protect the surface from oxidation and raveling, and to close hairline cracks. Every 5 to 7 years thereafter, an emulsion seal should be applied to seal small cracks and repair other common surface defects such as oxidation and raveling. Every second maintenance application should be a slurry seal.
2. Pavement deficiencies such as poor drainage, ruts, corrugations, and settlement should be evaluated and corrective action incorporated into pavement replacement.
3. Kenai Peninsula Borough Design Standards should be used for pavement maintenance, repairs, and replacement. A mix appropriate for low volume roads or freeway shoulders is most appropriate.

Asphalt Paving Examples:

Alligator Cracking



Linear Cracks



Raveling



Replacement Standards Paving: Concrete Sidewalks, Stairs and Curbs

Complete replacement of concrete is seldom required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take natural disasters or vandalism into consideration.

Condition	Definition	Action
1. Very Good The concrete is beginning to show defects.	The concrete is beginning to show defects with a few hairline cracks and some chipping and spalling.	Do not consider replacement under these conditions.
2. Satisfactory The concrete is showing defects but is within acceptable limits.	Cracks in concrete have spread and widened. The amount of chipping and spalling has increased. More than 75% of the surface is without defects.	Replacement is not yet justified; make necessary repairs and replace small sections where possible. Repair and/or replace any joint sealant that has failed. Seal all cracks wider than 1/8". Grind trip hazards smooth in areas of foot travel.
3. Poor The concrete is showing serious and extensive defects.	Cracks in concrete are numerous, large and extensive. Extensive spalling, chipping and cracking have deformed the face of the concrete making it rough. More than 50% of the surface has defects.	Replace the concrete.

Replacement Directives:

1. When possible, it is prudent to wait until several adjacent slabs can be replaced at the same time.
2. Follow Kenai Peninsula Borough Design Directives when replacing concrete.

Replacement Standards

Roofing: Built-up Asphalt

Asphalt or bitumen roofs will last beyond the warranty period if installed and maintained properly. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take natural disasters or vandalism into consideration. This includes regular inspections of the roofing. Standard roofing industry recommendations are to make thorough inspections of the roofing at least in the spring and the fall, and after serious weather trauma.

Condition	Definition	Action
1. Very Good The roofing is beginning to show slight wear and/or damage.	The surface aggregate on cap sheet may be thinning due to traffic or erosion in some locations. Ridges may have lifted due to expansion. The roof is still water-tight.	Do not consider replacement under these conditions. Keep debris off roof.
2. Satisfactory The roofing is showing wear and/or damage.	The cap sheet base fiber is exposed in some areas because of the loss of aggregate. The surface is begin to show buckling, fish-mouthing, slight cracking at ridges, open seams, punctures, splitting, tight bubbles, surface slippage, and/or wrinkling. Flashings, drip edges and flashed penetrations and minor leaks may have necessitated repair.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor The entire roofing system is showing serious and extensive wear and/or damage.	50% or more of the membrane is exposed, oxidized and cracked and the surface shows extensive blistering, buckling, cracking, fish- mouthing, open seams, punctures, splitting, surface slippage, ridging, and/or wrinkling. Moisture has penetrated through the roof insulating material damaging the roof deck and/or the interior of the building.	Replace this roofing system.

Replacement Directives:

1. Only roofing replacement systems and details that are found in the Kenai Peninsula Borough Design Directives should be used. A professional consultant must be hired to design and supervise application. Perform necessary maintenance to keep moisture from the roof deck and the interior of the building until the re-roofing work commences.
2. If roofing on a different wing or a different surface is in good condition, may be retained.
3. Schedule replacement of the roofing well in advance so that the project can be developed and bid during the winter months. Time the replacement of the roofing to avoid as much bad weather as possible.

Composition shingle roofs will last beyond the warranty period if installed and maintained properly. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take natural disasters or vandalism into consideration. This includes regular inspections of the roofing. Standard roofing industry recommendations are to make thorough inspections of the roofing at least in the spring and the fall, and after serious weather trauma.

Condition	Definition	Action
1. Very Good The shingles are beginning to show slight wear and/or damage.	Evidence of minor granule erosion may be seen in the rain gutters. Minor lifting of tabs may have occurred due to wind. The roof is still water-tight.	Do not consider replacement under these conditions. Re-tab as needed. Keep debris off roof.
2. Satisfactory The shingles are showing wear and/or damage.	The shingles are beginning to crack and/or curl. Some granules may have been eroded from the shingle's surface. Some tabs may have broken off. Flashings, drip edges and flashed penetrations may require repair. Minor leaks may have necessitated repair.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor The shingles are showing extensive wear and/or damage.	50% or more of the shingles are showing horizontal cracking or are badly curled. Many shingles are broken or are missing. Granule erosion may have exposed the felt backing on most of the shingles. Leaking has likely damaged the roof deck and/or interior of the building.	Replace this roofing system.

Replacement Directives:

1. Roofing on a different wing or a different surface in good condition may be retained only if doing so does not create an unsightly appearance.
2. Only roofing replacement systems and details that are found in the Kenai Peninsula Borough Design Directives should be used.
3. A professional consultant may be hired if necessary. Perform necessary maintenance to keep moisture from the roof deck and the interior of the building until the re-roofing work commences.
4. Schedule project well in advance so that roofing can be installed to avoid as much bad weather as possible.
5. Always refer back to the warranty, and file a claim with the shingle manufacturer if premature aging or failure has occurred.

Replacement Standards *Roofing: Single-Ply EPDM Membrane Fully Adhered*

Complete replacement of single-ply rubber membrane roofs is seldom required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take natural disasters or vandalism into consideration. This includes regular inspections of the roofing. Standard roofing industry recommendations are to make thorough inspections of the roofing at least in the spring and the fall, and after serious weather trauma.

Condition	Definition	Action
1. Very Good The roof is beginning to show slight wear and/or damage.	The membrane may show fading or discoloration due to sun and weather. Slight ridges may have lifted due to expansion. The roof is still water-tight.	Do not consider replacement under these conditions. Keep debris off roof.
2. Satisfactory The roofing is showing effects of traffic and/or wear.	The membrane is beginning to show buckling, slight cracking at ridges, open seams, oxidation, punctures, and/or wrinkling. Minor leaks may have necessitated repair.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible. Keep debris off roof.
3. Poor The roofing is showing extensive damage.	50% or more of the membrane is oxidized and cracked. The surface shows cracking, open seams, punctures. Moisture has penetrated through the roof insulating material, damaging the roof deck and/or the interior of the meetinghouse.	Replace this roofing system.

Replacement Directives:

1. Only roofing replacement systems and details that are found in the Kenai Peninsula Borough Design Directives should be used.
2. A professional consultant must be hired to design and supervise application.
3. Perform necessary maintenance to keep moisture from the roof deck and the interior of the building until the re-roofing work commences.
4. Schedule project well in advance so that roofing can be installed to avoid as much bad weather as possible.
5. Always refer back to the warranty, and file a claim with the roofing manufacturer if premature aging or failure has occurred.

Complete replacement of single-ply rubber membrane roofs is seldom required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take natural disasters or vandalism into consideration. This includes regular inspections of the roofing. Standard roofing industry recommendations are to make thorough inspections of the roofing at least in the spring and the fall, and after serious weather trauma.

Condition	Definition	Action
1. Very Good The roof is beginning to show the effects of traffic or erosion.	The ballast may be displaced due to traffic or erosion in some locations. The roof is still water tight.	Do not consider replacement under these conditions. Redistribute ballast as needed.
2. Satisfactory The roof is showing effects of traffic, erosion, expansion, oxidation and/or wear.	The membrane is exposed in some areas because of the ballast displacement. The membrane is beginning to show slight cracking at ridges, open seams, punctures, and/or splitting. Minor leaks may have necessitated repair.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor The roofing is showing extensive damage.	50% or more of the membrane is exposed, and oxidized. The membrane is no longer watertight due to buckling, extensive cracking, open seams, punctures and/or splitting. Moisture has penetrated through the roof insulating material, damaging the roof deck and/or the interior of the building.	Replace this roofing system. Perform necessary maintenance to keep moisture from the roof deck and the interior of the meetinghouse until the re-roofing work commences.

Replacement Directives:

1. Only roofing replacement systems and details that are found in the Kenai Peninsula Borough Design Directives should be used.
2. Perform necessary maintenance to keep moisture from the roof deck and the interior of the building until the re-roofing work commences.
3. A professional consultant must be hired to design and supervise application
4. Schedule project well in advance so that roofing can be installed to avoid as much bad weather as possible.
5. Always refer back to the warranty, and file a claim with the roofing manufacturer if premature aging or failure has occurred.

Replacement Standards

Roofing: Metal Panel or Standing Rib

Complete replacement of standing rib or metal panel roofs is seldom required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take natural disasters or vandalism into consideration. This includes regular inspections of the roofing. Standard roofing industry recommendations are to make thorough inspections of the roofing at least in the spring and the fall, and after serious weather trauma.

Condition	Definition	Action
1. Very Good Surfaces of panels are beginning to show slight wear and/or damage.	The panels may show slight fading, denting or discoloration. The roof is still water-tight.	Do not consider replacement under these conditions.
2. Satisfactory Surfaces of panels are showing wear and/or damage.	The panels are showing some fading denting, and/or discoloration. Some seams and/or fasteners may have come loose. Minor leaks may have necessitated repair.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor Surfaces of panels are showing extensive damage.	50% or more of the panels and seams (ribs) are dented, bent, discolored, corroded and/or loose. Leaking has likely damaged the roof deck and/or interior of the meetinghouse.	Replace this roofing system.

Replacement Directives:

1. Only roofing replacement systems and details that are found in the Kenai Peninsula Borough Design Directives should be used.
2. A professional consultant must be hired to design and supervise application.
3. Perform necessary maintenance to keep moisture from the roof deck and the interior of the building until the re-roofing work commences.
4. Schedule project well in advance so that roofing can be installed to avoid as much bad weather as possible.
5. Always refer back to the warranty, and file a claim with the roofing manufacturer if premature aging or failure has occurred.

Replacement Standards

Roofing: Wood or Shake Shingles

It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take natural disasters into consideration. This includes regular inspections of the roofing. Standard roofing industry recommendations are to make thorough inspections of the roofing at least in the spring and the fall, and after serious weather trauma.

Condition	Definition	Action
1. Very Good The shingles are beginning to show slight wear and/or damage.	The shingles may show fading or discoloration due to sun and weather. A few shingles may have broken, splintered, come loose, and/or are missing. The roof is still water-tight.	Do not consider replacement under these conditions. Keep debris, moss, mold and fungus off roof. Apply linseed oil and graphite mix when necessary.
2. Satisfactory The shingles are showing wear and/or damage.	Wear due to the elements has caused slight warping and/or thinning of the exposed portion of the shingles. Damage to shingles has become more widespread due to elements, fastener failure, or traffic. Many shingles may have cracked, loosened or broken. Minor leaks may have necessitated repair to the shingles and/or base sheet.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible. Apply linseed oil and graphite mix when necessary.
3. Poor The shingles are showing extensive wear and/or damage.	50% or more of the shingles are cracked, warped, eroded, broken and/or missing. Leaking has likely damaged the roof deck and/or interior of the meetinghouse.	Replace this roofing system.

Replacement Directives:

1. Only roofing replacement systems and details that are found in the Kenai Peninsula Borough Design Directives should be used.
2. A professional consultant must be hired to design and supervise application.
3. Perform necessary maintenance to keep moisture from the roof deck and the interior of the building until the re-roofing work commences.
4. Schedule project well in advance so that roofing can be installed to avoid as much bad weather as possible.
5. Always refer back to the warranty, and file a claim with the roofing manufacturer if premature aging or failure has occurred.

Complete replacement of fascia is seldom required. It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration

Condition	Definition	Action
1. Very Good The soffit and fascia are beginning to show slight signs of wear. Cleaning might be necessary to keep them in this condition.	Fascia is slightly dented, but has no loose sections. There is slight discoloration. All soffit panels are in near perfect condition. There are slight areas of dents, holes or bent panels.	Do not consider replacement under these conditions.
2. Satisfactory The soffit and fascia are showing wear, but are within acceptable limits.	Fascia has some dents and has a few loose sections. There is some discoloration. Some soffit panels may be dented, bent or may have holes. A panel or two may be out of place, due to a windstorm. The majority of the soffit is still in very good condition.	Replacement is not yet justified. Make necessary repairs and sectional replacements.
3. Poor The soffit and fascia are showing a considerable amount of wear.	Fascia has several dents and has some loose sections. Discoloration detracts from the building's exterior appearance. 50% or more of the soffit panels are bent, have holes, and/or have dents.	Replace the soffit or fascia.

Replacement Directives:

1. Use Kenai Peninsula Borough Design Directives when replacing the building's soffit or fascia

Complete replacement of vinyl or fabric wall covering is seldom required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take vandalism into consideration. Wall covering replacement may include all of the wall coverings in a facility, or the wall coverings may be replaced in homogeneous wear zones identified as

1. Entries and hallways
2. Classrooms and offices
3. Commons

Condition	Definition	Action
1. Very Good The wall covering is beginning to show slight signs of wear.	Wall covering has no tears. Material may be slightly frayed. Seams are tight. There is no discoloration or stains.	Do not consider replacement under these conditions.
2. Satisfactory Wall covering is showing some defects, but is within acceptable limits.	Wall coverings may have slight tears. There may be some fraying. There may be scuff marks or gouges present. Seams may have slight sections coming undone. No stains are present. There is no discoloration.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor The wall covering is showing a considerable amount of wear.	Wall coverings have a considerable amount of tears and gouges. There is extensive fraying. Seams are coming undone. Considerable stains are present with some discoloration.	Replace the wall covering.

Replacement Directives:

1. Careful consideration should be given when selecting wall coverings in areas of high humidity. Where possible, when replacement is warranted, convert to a painted surface.
2. Use Kenai Peninsula Borough Design Directives when replacing wall coverings.

Replacement Standards

Wall Tile: Ceramic

Complete replacement of ceramic wall tile is seldom if ever required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The tile wall is beginning to show slight signs of wear. Regular cleaning and preventative maintenance keep appearance clean and new.	The wall has no discoloration or worn surface. There may be slight cracks, with no chipped or broken tiles. There are no loose or missing portions. Grout is uniform in color and appearance.	Do not consider replacement under these conditions.
2. Satisfactory The tile wall is showing some defects, but is within acceptable limits. The tile surface continues to serve its purpose with regular cleaning and intermittent repairs.	The wall has no discoloration or worn surface. There may be some hairline cracks or chips, but no tiles are broken. There are no loose or missing portions. Grout may show variation in color or appearance.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor The wall tile is showing considerable wear and defects. The condition of the tile is distracting.	50% or more of the wall tile is discolored. There are cracks and/or chips present with some tiles broken. There are some loose, broken or missing portions. Grout shows obvious variation in color and appearance. Some grout is loose or missing.	Replace the wall tile. If only one section of tile has been damaged, consider only replacing that tile area. This may not be possible if a tile match cannot be made.

Replacement Directives:

1. If only one section of tile has been damaged, find matching tile and only replace the damaged section.
2. When replacing wall tile, make sure to buy extra tiles and store them for future repairs and replacements.
3. Dissatisfaction with color is not justification to replace the tile.
4. Use Kenai Peninsula Borough Design Directives when replacing ceramic tile.

It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good Blinds are beginning to show wear. Cleaning and repairs help keep the blinds in good working condition.	Blinds have little to no stains or bends in slats. Hardware functions smoothly and has no broken or missing parts.	Do not consider replacement under these conditions.
2. Satisfactory Blinds are showing defects, but are within acceptable limits. Blinds continue to serve their purpose with regular cleaning and repairs.	Blinds have staining and damage to slats. 90% of slats are in good condition. Hardware functions smoothly and has few broken or missing parts.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor Blinds are showing considerable wear and defects. They no longer function as designed and will not without several repairs.	Blinds are stained with 75% or more of the slats damaged. Hardware does not function and may have several broken or missing parts.	Replace the blinds.

Replacement Directives:

1. Use only qualified contractors, specifications and/or details when replacing blinds.

It should be possible, with proper and timely repairs and preventive maintenance, to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The drapes are beginning to show wear. Cleaning and repairs help keep the drapes in good working condition.	Drapes have a slight number of loose threads. Hems are secure and seams tight. If liners are present, stitching is tight. There are no tears. Hardware functions smoothly and has no broken or missing parts.	Do not consider replacement under these conditions.
2. Satisfactory The drapes are showing defects, but are within acceptable limits. The drapes continue to serve their purpose with regular cleaning and repairs.	Drapes have some loose threads. The sunlight is starting to weaken the fibers in the material. Hems are secure and seams tight. If liners are present, stitching is tight. There are no tears. Hardware functions smoothly and has few broken or missing parts.	Replacement is not yet justified. Make necessary repairs and component replacements.
3. Poor The drapes are showing considerable wear and defects. The drapes no longer function as designed and will not without several repairs, to the point where the repairs are noticeable and distracting.	Drapes have several loose threads. Damage in the form of holes and tears are present, due to the fragility of the material. Hems or seams are coming un-sewn. Liners may be hanging loose. There may be tears. Hardware does not function and may have several broken or missing parts.	Replace the drapes. If the liners are stained and the hardware is bad, but the rest of the drapes are in good condition, consider replacing only the liners and hardware.

Replacement Directives:

1. Use only qualified contractors, specifications and/or details when replacing drapes.
2. Blackout drapes may need to be installed where projections are utilized.

Complete replacement of windows or skylights is seldom required. It should be possible, with proper and timely repairs and preventive maintenance to extend the life for many years. This does not take vandalism into consideration.

Condition	Definition	Action
1. Very Good The window is beginning to show slight signs of wear.	Glass, window frames and mechanisms have slightly loose parts with no chips, cracks or missing parts. Mechanisms operate and may slightly grind, rub or squeak.	Do not consider replacement under these conditions.
2. Satisfactory The window is showing some defects, but is within acceptable limits.	Glass, window frames and mechanisms have some loose parts and may have slight chips with no cracks, broken or missing parts. Mechanisms operate and may have some grinding, rubbing or squeaking. Rubber seals are weathered and are cracking. The glass is starting to haze over.	Replacement is not yet justified. Make necessary repairs and replace small sections where possible.
3. Poor The window is showing considerable wear and defects	Glass, window frames and mechanisms have some cracks, chips, and missing, loose or broken parts. Mechanisms may or may not operate and may have extensive grinding, rubbing, or squeaking. Most of the rubber seals are gone. Hazing in glass has severely affected the transparency of the glass.	Replace the damaged window or skylight.

Replacement Directives:

1. Use Kenai Peninsula Borough Design Directives when replacing windows.

Improvement Standards *Building Interior: Reconfigure or Change Room Use*

Reasons for reconfiguring or changing the use of a room:

1. Upgrading a space for compliance to ADA codes and regulations.
2. Creating a new office or classroom out of an existing space.
3. The addition or removal of countertops, shelves or closets in a room.

Improvement Directives:

When considering the reconfiguration of a space or the changing of a room's use, please consider the following:

- Use an architect, engineer, or project manager in the design processes in order to make sure that changes will not affect the building's structural integrity. This is also a good way to make sure that all changes are in compliance with local and national building codes. Choose a professional that will stay consistent with the original building type and design.
- Make sure that the proposed changes follow the guidelines found in the Kenai Peninsula Borough Design Standards and DEED Guidelines.
- When changing the function of a space, take into consideration the other areas that are affected by the change. During the planning phase, consider how future additions and remodels will be affected by the design choice of the current project at hand.
- There should be a consistency in appearance and quality with the original building style when a room is remodeled.

When reconfiguring areas of a building, a life cycle cost analysis should be made (with the help of a qualified consultant) to determine what the most cost effective design and construction may be.

New or Additional space cannot be added to an existing facility without justification that the space is needed by DEED Guidelines, and approval from DEED.